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Circuit breaker size S3 for system protection with approval circuit breaker UL 489, CSA C22.2 No.5-02 A-release 15 A N-release 225 A screw terminal



|                                                                 |                                                           |
|-----------------------------------------------------------------|-----------------------------------------------------------|
| product brand name                                              | SIRIUS                                                    |
| product designation                                             | Circuit breaker                                           |
| design of the product                                           | For system protection according to UL 489/CSA C22.2 No. 5 |
| product type designation                                        | 3RV2                                                      |
| General technical data                                          |                                                           |
| size of the circuit-breaker                                     | S3                                                        |
| product extension auxiliary switch                              | Yes                                                       |
| power loss [W] for rated value of the current                   |                                                           |
| • at AC in hot operating state                                  | 14 W                                                      |
| • at AC in hot operating state per pole                         | 4.7 W                                                     |
| insulation voltage with degree of pollution 3 at AC rated value | 1 000 V                                                   |
| surge voltage resistance rated value                            | 8 kV                                                      |
| shock resistance according to IEC 60068-2-27                    | 25 g / 11 ms (rectangular impulse and sine pulse)         |
| mechanical service life (operating cycles)                      |                                                           |
| • of the main contacts typical                                  | 25 000                                                    |
| • of auxiliary contacts typical                                 | 25 000                                                    |
| electrical endurance (operating cycles) typical                 | 25 000                                                    |
| reference code according to IEC 81346-2                         | Q                                                         |
| Substance Prohibitance (Date)                                   | 03/01/2017                                                |
| SVHC substance name                                             | Lead - 7439-92-1                                          |
| Ambient conditions                                              |                                                           |
| installation altitude at height above sea level maximum         | 2 000 m                                                   |
| ambient temperature                                             |                                                           |
| • during operation                                              | -20 ... +60 °C                                            |
| • during storage                                                | -50 ... +80 °C                                            |
| • during transport                                              | -50 ... +80 °C                                            |
| relative humidity during operation                              | 10 ... 95 %                                               |
| Main circuit                                                    |                                                           |
| number of poles for main current circuit                        | 3                                                         |
| operating voltage                                               |                                                           |
| • rated value                                                   | 20 ... 600 V                                              |
| operating frequency rated value                                 | 50 ... 60 Hz                                              |
| operational current rated value                                 | 15 A                                                      |
| Protective and monitoring functions                             |                                                           |
| product function                                                |                                                           |
| • ground fault detection                                        | No                                                        |
| • phase failure detection                                       | No                                                        |

|                                                                                    |                                                                          |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <b>design of the overload release</b>                                              | thermal                                                                  |
| <b>maximum short-circuit current breaking capacity (Icu)</b>                       |                                                                          |
| • at AC at 240 V rated value                                                       | 100 kA                                                                   |
| • at AC at 400 V rated value                                                       | 100 kA                                                                   |
| • at 480 AC Y/277 V according to UL 489 rated value                                | 65 kA                                                                    |
| • at 480 V AC according to UL 489 rated value                                      | 65 kA                                                                    |
| <b>operating short-circuit current breaking capacity (Ics) at AC</b>               |                                                                          |
| • at 240 V rated value                                                             | 100 kA                                                                   |
| • at 400 V rated value                                                             | 50 kA                                                                    |
| response value current of instantaneous short-circuit trip unit                    | 225 A                                                                    |
| <b>Short-circuit protection</b>                                                    |                                                                          |
| <b>product function short circuit protection</b>                                   | Yes                                                                      |
| <b>design of the short-circuit trip</b>                                            | magnetic                                                                 |
| <b>Installation/ mounting/ dimensions</b>                                          |                                                                          |
| <b>mounting position</b>                                                           | any                                                                      |
| <b>fastening method</b>                                                            | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 |
| <b>height</b>                                                                      | 170 mm                                                                   |
| <b>width</b>                                                                       | 70 mm                                                                    |
| <b>depth</b>                                                                       | 176 mm                                                                   |
| <b>required spacing</b>                                                            |                                                                          |
| • for grounded parts at 400 V                                                      |                                                                          |
| — downwards                                                                        | 90 mm                                                                    |
| — upwards                                                                          | 90 mm                                                                    |
| — at the side                                                                      | 10 mm                                                                    |
| • for live parts at 400 V                                                          |                                                                          |
| — downwards                                                                        | 90 mm                                                                    |
| — upwards                                                                          | 90 mm                                                                    |
| — at the side                                                                      | 10 mm                                                                    |
| <b>Connections/ Terminals</b>                                                      |                                                                          |
| <b>type of electrical connection</b>                                               |                                                                          |
| • for main current circuit                                                         | screw-type terminals                                                     |
| <b>arrangement of electrical connectors for main current circuit</b>               | Top and bottom                                                           |
| <b>type of connectable conductor cross-sections</b>                                |                                                                          |
| • for main contacts                                                                |                                                                          |
| — solid                                                                            | 2x (2.5 ... 16 mm²)                                                      |
| — solid or stranded                                                                | 2x (2,5 ... 50 mm²), 1x (10 ... 70 mm²)                                  |
| — finely stranded with core end processing                                         | 2x (2.5 ... 35 mm²), 1x (2.5 ... 50 mm²)                                 |
| — finely stranded without core end processing                                      | 2x (10 ... 35 mm²), 1x (10 ... 50 mm²)                                   |
| • for AWG cables for main contacts                                                 | 14 solid - only front clamping point                                     |
| • for AWG cables for main contacts for box terminal using the front clamping point | 14 solid - only front clamping point                                     |
| <b>tightening torque</b>                                                           |                                                                          |
| • for main contacts with screw-type terminals                                      | 4.5 ... 6 N·m                                                            |
| <b>design of screwdriver shaft</b>                                                 | Hexagonal socket                                                         |
| <b>size of the screwdriver tip</b>                                                 | 4 mm                                                                     |
| <b>design of the thread of the connection screw</b>                                |                                                                          |
| • for main contacts                                                                | M8                                                                       |
| <b>Safety related data</b>                                                         |                                                                          |
| product function suitable for safety function                                      | Yes                                                                      |
| <b>suitability for use</b>                                                         |                                                                          |
| • safety-related switching on                                                      | No                                                                       |
| • safety-related switching OFF                                                     | Yes                                                                      |
| <b>service life maximum</b>                                                        | 10 a                                                                     |
| <b>test wear-related service life necessary</b>                                    | Yes                                                                      |
| <b>proportion of dangerous failures</b>                                            |                                                                          |
| • with low demand rate according to SN 31920                                       | 40 %                                                                     |
| • with high demand rate according to SN 31920                                      | 50 %                                                                     |
| <b>B10 value with high demand rate according to SN 31920</b>                       | 5 000                                                                    |
| <b>failure rate [FIT] with low demand rate according to SN 31920</b>               | 50 FIT                                                                   |

|                                                                  |                                                  |
|------------------------------------------------------------------|--------------------------------------------------|
| ISO 13849                                                        |                                                  |
| device type according to ISO 13849-1                             | 3                                                |
| overdimensioning according to ISO 13849-2 necessary              | Yes                                              |
| IEC 61508                                                        |                                                  |
| safety device type according to IEC 61508-2                      | Type A                                           |
| T1 value                                                         | 10 a                                             |
| • for proof test interval or service life according to IEC 61508 |                                                  |
| Electrical Safety                                                |                                                  |
| protection class IP on the front according to IEC 60529          | IP20                                             |
| touch protection on the front according to IEC 60529             | finger-safe, for vertical contact from the front |
| Display                                                          |                                                  |
| display version for switching status                             | Handle                                           |
| Approvals Certificates                                           |                                                  |
| General Product Approval                                         |                                                  |



[Confirmation](#)



[KC](#)

| General Product Approval | Test Certificates                        | Marine / Shipping                                  | other                         |
|--------------------------|------------------------------------------|----------------------------------------------------|-------------------------------|
|                          | <a href="#">Special Test Certificate</a> | <a href="#">Type Test Certificates/Test Report</a> | <a href="#">Miscellaneous</a> |
|                          |                                          |                                                    | <a href="#">Confirmation</a>  |
| other                    | Environment                              |                                                    |                               |



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[Environmental Confirmations](#)

#### Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2742-5BD10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2742-5BD10>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2742-5BD10>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2742-5BD10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2742-5BD10&lang=en)

Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2742-5BD10/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2742-5BD10&objecttype=14&gridview=view1>



